

WHAT IS CLAIMED IS:

1. A distributed ultrasound diagnostics network comprising:

5           a plurality of diagnostics computers containing ultrasound system diagnostics software which are operated by servicepersons to download diagnostic information from ultrasound systems; and

10           a central diagnostics location with which said diagnostics computers periodically communicate to transfer said ultrasound system diagnostic information,

            whereby said central diagnostic location is a repository for diagnostic information obtained by said diagnostic computers from a plurality of ultrasound  
15           systems.

2. The distributed ultrasound diagnostics network of Claim 1, wherein said diagnostics computers comprise portable computers.

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3. The distributed ultrasound diagnostics network of Claim 2, wherein said portable computers comprise laptop computers.

25           4. The distributed ultrasound diagnostics network of Claim 1, wherein said diagnostics computers download said diagnostic information over a network from locations remote from said ultrasound systems.

30           5. The distributed ultrasound diagnostics network of Claim 4, wherein said diagnostics computers further act to download diagnostic information over a direct connection at the site of said ultrasound systems.

6. The distributed ultrasound diagnostics network of Claim 5, wherein said diagnostics computers upload said diagnostic information over a network to said central diagnostics location from location remote from said central diagnostics location.

7. The distributed ultrasound diagnostics network of Claim 1, wherein said ultrasound system diagnostic information comprises information concerning ultrasound system error conditions; and

wherein said central diagnostics location operates on said ultrasound system diagnostic information by performing at least one of the following operations:

determining root causes of errors;  
statistically analyzing error conditions;  
utilizing said diagnostic information to eliminate error conditions from an ultrasound system; and  
utilizing said diagnostic information to develop a new ultrasound system.

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8. A diagnostics computer which is operable by a serviceperson when connected to an ultrasound system either at the site of said ultrasound system or over a network to perform at least one of the following operations on the ultrasound system:

rebooting the ultrasound system;  
performing temperature or voltage measurements of the ultrasound system;  
placing banner messages on the display of the ultrasound system;  
enabling a capability of the ultrasound system;  
correcting corrupted files of the ultrasound system;  
and  
flashing the firmware of the ultrasound system.

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9. The diagnostics computer of Claim 8, wherein said diagnostics computer is a portable computer.

5 10. The diagnostics computer of Claim 9, wherein said portable computer is a laptop computer.

10 11. The diagnostics computer of Claim 8, wherein said computer is further operable to download diagnostic information from said ultrasound system.

12. The diagnostics computer of Claim 11, wherein said diagnostics computer is further operable to upload said downloaded diagnostic information to a central repository of ultrasound system diagnostic information.

15 13. The diagnostics computer of Claim 12, wherein said diagnostics computer automatically uploads said downloaded diagnostic information to said central repository of ultrasound system diagnostic information when said diagnostics computer is connected to said central repository by a suitable communications connection.

20 14. The diagnostics computer of Claim 8, wherein said diagnostics computer is operable to perform at least two of said operations.

25 15. The diagnostics computer of Claim 8, wherein said diagnostics computer is operable to perform at least three of said operations.

30 16. A diagnostics computer which is operable by a serviceperson when connected to an ultrasound system from a location remote from the site of said ultrasound system

to perform at least one of the following operations on the ultrasound system:

- rebooting the ultrasound system;
- performing temperature or voltage measurements of the ultrasound system;
- placing banner messages on the display of the ultrasound system;
- enabling a capability of the ultrasound system;
- correcting corrupted files of the ultrasound system;
- and
- flashing the firmware of the ultrasound system.

17. The diagnostics computer of Claim 16, wherein said diagnostics computer is operable to perform at least two of said operations.

18. The diagnostics computer of Claim 16, wherein said diagnostics computer is operable to perform at least three of said operations.

19. A diagnostics computer which is operable by a serviceperson when connected over a network to an ultrasound system to perform at least one of the following operations on the ultrasound system:

- rebooting the ultrasound system;
- performing temperature or voltage measurements of the ultrasound system;
- placing banner messages on the display of the ultrasound system;
- enabling a capability of the ultrasound system;
- correcting corrupted files of the ultrasound system;
- and
- flashing the firmware of the ultrasound system.

20. The diagnostics computer of Claim 19, wherein said diagnostics computer is operable to perform at least two of said operations.

5           21. The diagnostics computer of Claim 19, wherein said diagnostics computer is operable to perform at least three of said operations.

10           22. A diagnostics computer which is operable by a serviceperson to remotely diagnose an ultrasound system over a network comprising:

          a download utility which downloads error event information from an ultrasound system including substantially concurrent user event information.

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          23. The diagnostics computer of Claim 22, wherein said user event information comprises information concerning ultrasound system commands initiated by a user.

20           24. The diagnostics computer of Claim 23, wherein said user event information comprises an event which either precedes or succeeds the time of occurrence of an error event.

25           25. The diagnostics computer of Claim 22, further comprising an upload utility which uploads downloaded error event information to a central diagnostics location.

30           26. The diagnostics computer of Claim 25, wherein said upload utility acts to automatically upload said downloaded error event information when said diagnostics computer is suitably connected to said central diagnostics location.

27. The diagnostics computer of Claim 25, wherein said upload utility acts to upload said downloaded error event information by use of an electronic mail protocol.

5           28. The diagnostics computer of Claim 25, wherein said upload utility acts to upload said downloaded error event information by use of a file transfer protocol.

10           29. A method for enabling an ultrasound system capability comprising:

          establishing a communications link between a diagnostics computer and an ultrasound system;

          sending a command to said ultrasound system to activate a new function on said ultrasound system; and

15           disconnecting said communications link.

          30. The method of Claim 29, wherein said new function is activated for a predetermined period of time.

20           31. The method of Claim 29, wherein said diagnostics computer is at a location remote from said ultrasound system, and said communications link is established over a communications network.

25           32. The method of Claim 29, wherein said step of sending further comprises utilizing an alphanumeric key which identifies an ultrasound system function.

30           33. The method of Claim 32, wherein said alphanumeric key further identifies the ultrasound system in which said ultrasound system function is to be activated.

34. The method of Claim 32, wherein said alphanumeric key is issued by an ultrasound system seller or manufacturer.

5           35. The method of Claim 29, wherein software for said new function is resident on said ultrasound system but not enabled prior to said step of establishing.

10           36. The method of Claim 29, wherein software for said new function is loaded into said ultrasound system subsequent to said step of establishing.

15           37. The method of Claim 36, wherein said diagnostics computer is at a location remote from said ultrasound system, and wherein said software for said new function is downloaded to said ultrasound system from said diagnostics computer.